

WHAT IS CLAIMED IS:

1. A circuit board for transmitting signals, comprising:
 - a dielectric layer;
 - a signal line configured as a pattern on the dielectric layer to transmit the signals;
 - a pad formed on the dielectric layer, the pattern connected to and extending away from the pad; and
 - a ground/power supply layer formed under the dielectric layer and having a hole below the pad, the hole extending in a direction substantially parallel with a direction of the pattern extending away from the pad.
2. The circuit board of claim 1, wherein:
the hole is rectangular and formed outside an imaginary line extending the pattern.
3. The circuit board of claim 1, wherein:
the hole is rectangular and has a width wider than that of the pattern and narrower than that of the pad.
4. The circuit board of claim 1, wherein:
the hole comprises a pair of rectangular holes formed below the pad outside imaginary lines extending the pattern and a third rectangular hole formed between the imaginary lines.

5. The circuit board of claim 1, wherein:

the hole comprises a pair of rectangular holes formed below the pad outside imaginary lines extending the pattern.

6. The circuit board of claim 5, wherein:

each of the holes spreads in a width direction of the pad at a junction of the pattern and the pad.

7. The circuit board of claim 5, wherein:

each of the holes narrows in a width direction of the pad at an edge of the pad remote from a junction of the pattern and the pad.

8. The circuit board of claim 1, wherein:

the hole is rectangular and formed between imaginary lines extending the pattern.

9. A method for producing a circuit board for transmitting signals, comprising:

forming a dielectric layer;

forming a signal line configured as a pattern on the dielectric layer to transmit the signals;

forming a pad on the dielectric layer and connected to the pattern; and

forming a ground/power supply layer under the dielectric layer including a hole below the pad, the hole extending in a direction substantially parallel with a direction of the pattern extending away from the pad.

10. The method of claim 9, wherein forming the ground/power supply layer includes: forming the hole as a rectangular hole outside an imaginary line extending the pattern.

11. The method of claim 9, wherein forming the ground/power supply layer includes: forming the hole as a rectangular hole having a width wider than that of the pattern and narrower than that of the pad.

12. The method of claim 9, wherein forming the ground/power supply layer includes: forming the hole as a pair of rectangular holes below the pad outside imaginary lines extending the pattern and a third rectangular hole formed between the imaginary lines.

13. The method of claim 9, wherein forming the ground/power supply layer includes: forming a pair of rectangular holes below the pad outside imaginary lines extending the pattern.

14. The method of claim 9, wherein forming the ground/power supply layer includes: forming the hole as a rectangular hole between imaginary lines extending the pattern.

15. An electronic device, comprising:
a body for mounting circuit elements, and a circuit board mounted in the body and including a signal transmitting line on a surface thereof, the circuit board including:
a dielectric layer having an upper surface and a lower surface;

a pattern formed on the upper surface of the dielectric layer, the pattern comprising the signal transmission line via which signals are transmitted;

a pad formed on the upper surface of the dielectric layer and connected to the pattern, the pad having a width wider than that of the pattern; and

a ground/power supply layer formed on the lower surface of the dielectric layer and having at least one hole below the pad, the hole being rectangular and longer in a direction substantially parallel with a direction of the pattern extending away from the pad.

16. The device of claim 15, wherein:

the hole is a rectangular hole and formed outside an imaginary line extending the pattern.

17. The device of claim 15, wherein

the hole is rectangular and has a width wider than that of the pattern and narrower than that of the pad.

18. The device of claim 15, wherein:

the hole comprises a pair of rectangular holes formed below the pad outside imaginary lines extending the pattern and a third rectangular hole formed between the imaginary lines.

19. The device of claim 15, wherein:

the signals are high-speed signals.

20. The device of claim 15, wherein:

the hole comprises a pair of rectangular holes formed below the pad outside imaginary lines extending the pattern.

21. The device of claim 20, wherein:

each of the holes spreads in a width direction of the pad at a junction of the pattern and the pad.

22. The device of claim 20, wherein:

each of the holes narrows in a width direction of the pad at an edge of the pad remote from a junction of the pad.

23. The device of claim 15, wherein:

the hole is rectangular and formed between imaginary lines extending the pattern.